

Tuberculin skin testing – why, how and what next?

1 Patient selection

Why do a tuberculin skin test?

- The TST will identify HIV-seropositive clients who have latent TB infection and will benefit from isoniazid preventive therapy (IPT).
- The drug 'isoniazid' (INH) can kill latent TB infection (infection with the germ *Mycobacterium tuberculosis*) and prevent people from getting active TB disease.
- Taking INH for six months is known as INH preventive therapy (IPT) and is a safe and effective intervention to prevent TB in people living with HIV.

Ensure client is eligible for INH prophylaxis. The client must be:

- HIV-positive
- Well (not have active TB disease, symptoms of TB or any other illness)
- Not eligible for ART
- Able to take INH

Do NOT perform a tuberculin skin test on clients who are:

- HIV-negative.
- Ill with fever or loss of weight or cough >2 weeks
- Eligible for ART (CD4 count is <200 cells/mm³) or receiving ART
- On TB treatment or have completed TB treatment in the last 2 years

Only place a tuberculin skin test on

MONDAY, TUESDAY or FRIDAY,

because the test must be read 48-72 hours after being placed

2 Administration

1. Locate and clean injection site

- Place forearm palm side up on a firm, well-lit surface



- Select an area free of scars and sores, approximately 5-10cm below the elbow joint to place the test
- Clean this area with an alcohol swab

2. Prepare syringe

- Check expiration date on vial and ensure vial contains tuberculin (PPD RT 23, 2 T.U./0.1ml)



- Use a tuberculin syringe and a 27 gauge needle with a short bevel
- Fill the syringe with 0.1ml of tuberculin

3. Inject tuberculin

- Insert the needle slowly into the skin, bevel up, at an angle of 5 - 15 degree



- Needle bevel can be seen just below skin surface
- During the injection, a tense, pale wheal should appear over the needle



4. Check skin test

- Wheal should be 6 to 10mm in diameter. If not, repeat test at a site at least 2 inches away from original site

5. Record Information

- Record the date and time of test administration, injection site, lot number and strength of tuberculin on the client's clinic record

3 Reading

The skin test should be read between 48 and 72 hours after administration. A patient who does not return within 72 hours will probably need to be rescheduled for another skin test.

1. Inspect site

- Visually inspect site under good light, look for:
 - Erythema (reddening of the skin) - do not measure this
 - Induration (hard, dense, raised formation)



2. Palpate induration

- Use fingers to find margins of induration

3. Mark induration

- Use fingertip as a guide for marking widest edges of induration across forearm



4. Measure induration (not erythema)

- Place "0" ruler line inside left dot edge
- Read ruler line inside right dot edge (use lower measurement if between two gradations on mm scale)

5. Record measurement of induration in mm

- If no induration, record as 0mm
- Do not record as "positive" or "negative"
- Only record measurement in mm

4 Interpretation and action

What is a positive TST?

- The TST is **POSITIVE** if the area of induration is **bigger than 4mm** (i.e. 5mm or more)
- A positive TST means that the client has latent infection with *Mycobacterium tuberculosis* and will benefit from INH preventive therapy

Action if TST is positive:

- Counsel patient regarding INH prophylaxis including
 - The need for adherence
 - Possible side effects such as peripheral neuropathy and liver toxicity (pain in right upper quadrant, jaundice, nausea and vomiting)
- Give one month's supply of INH 300mg daily
- Request client to return in one month or sooner if needed

What is a negative TST?

- The TST is **NEGATIVE** if the area of induration is **less than 4mm**, or equal to 4mm in diameter
- Negative TST may mean:
 - that the client is anergic and unable to respond to tuberculin
- OR**
- The client is not infected with *Mycobacterium tuberculosis*

Action if TST is negative:

- The client is not eligible for isoniazid prophylaxis
- The client should be observed for symptoms of TB (cough >2 weeks, fever and night sweats and return for investigation of TB if these are present)